

Notice of Allowability

Application No.

10/813,579

Examiner

Debra Wolfe

Applicant(s)

DAEHN, GLENN S.

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application filed on March 30, 2004.
2. ☒ The allowed claim(s) is/are 1-30.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



DENNIS H. BANKS
 SUPERVISORY PATENT EXAMINER
 TECHNOLOGY CENTER 3700



EXAMINER'S AMENDMENT

The application has been amended as follows:

In the specification delete the following from page 1 lines 3-5

"CROSS-REFERENCE TO RELATED APPLICATIONS

This application is related to U.S. Patent Application Serial No. __/__, __ (Docket No. OSU 0019 PA), filed concurrently herewith".

NOTICE OF ALLOWABILITY

The following is an examiner's statement of reasons for allowance.

1. It is the opinion of the examiner that the art of record (considered as a whole) neither anticipates nor renders obvious "a conductive frame is configured to define a return path for eddy current induced in a sheet of material upon activation of the electromagnetic actuator" in combination with the rest of the claimed limitations set forth in the independent claims 1, 27, 28, and 29.

2. Further searching by the examiner yielded additional prior art as follows:

Gafri et al (U.S. Patent 6,708,542 B1) discloses an electromagnetic forming of a metal plate using an electromagnetic actuator (forming coil assembly 84) positioned opposite to a profiled die portion (mold 82) and a frame (See FIG below) configured to secure a metal plate (86) and permit deformation of the sheet against the profiled die surface upon activation of the electromagnetic actuator (forming coil assembly 84) [See FIG 5A and 5B].

Uesugi et al (U.S. Patent # 4,872,946) discloses a method of manufacturing supports for lithographic printing plate that teaches it is known in the art that electromagnetic induction causes eddy currents to flow in the metal web.



3. The above cited prior art fails to disclose a conductive frame that is configured to define a return path for eddy currents induced in the sheet of material upon activation of the electromagnetic actuator. Therefore, it is concluded that claims 1, 27, 28, and 29 of the present invention are allowable subject matter over the prior art. Claims 1-29 are allowed.

4. It is the opinion of the examiner that the art of record (considered as a whole) neither anticipates nor renders obvious "driving an electromagnetic actuator in an induction heating mode to heat the sheet of material through induction and then driving the electromagnetic actuator in an electromagnetic forming mode following the induction heating mode to generate a repulsive force between the actuator and the sheet of material of sufficient intensity to deform the sheet against a profiled die surface" in combination with the rest of the claimed limitations set forth in the independent claims 30.

5. Further searching by the examiner yielded additional prior art as follows:

Gafri et al (U.S. Patent 6,708,542 B1) discloses an electromagnetic forming of a metal plate using an electromagnetic actuator (forming coil assembly 84) positioned opposite to a profiled die portion (mold 82) and a frame (See FIG below) configured to secure a metal plate (86) and permit deformation of the sheet against the profiled die surface upon activation of the electromagnetic actuator (forming coil assembly 84) [See FIG 5A and 5B].

Leftault, Jr et al (U.S. Patent # 5,058,408) discloses a method for partially annealing the sidewall of a container that teaches the use of base (16) having induction heating coils (20), mounted at the sidewalls (14) of a container body (10), to heat the selected area of the sidewalls (14) of the container body (10). Leftault, Jr et al also suggests that in a preferred embodiment after the sidewalls (14) of the container (10) is heated a coil of electrically conductive material is disposed



inside the container (10) and energized to create an electromagnetic force to expand outwardly the thermally treated portions of the container (10).

6. The above cited prior art fails to disclose an electromagnetic actuator that performs an induction heating mode and a electromagnetic heating mode to first heat the sheet of material and then deform the sheet of material against a profiled die surface. Therefore, it is concluded that claim 30 of the present invention is allowable subject matter over the prior art. Claim 30 is allowed.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra Wolfe whose telephone number is (571) 272-1904. The examiner can normally be reached Monday - Thursday 6am - 3:30pm with alternating Fridays 6am - 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached at (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Debra Wolfe
Examiner
Art Unit 3725

A handwritten signature in black ink, appearing to read "D. H. Banks", with a long horizontal line extending to the right.

DERRIS H. BANKS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700